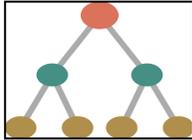


Knowledge Organiser - Year 6 - Science: Classification



Classification is the arrangement of animals and plants into groups according to their observed similarities by kingdom, phylum, class, order, family, genus, species (and division in plants).

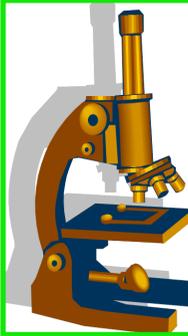
Key Vocabulary

Arachnid	An arthropod with 8 legs and no antennae such as a spider or scorpion.
Arthropod	An invertebrate with legs– insects, arachnids, crustaceans and myriapods are in this group.
Bacteria	Microscopic single-celled organisms, lacking a distinct nucleus. They may be shaped like spheres, rods, or spirals.
Crustacean	An invertebrate with a body made of segments, a tough outer shell, two pairs of antennae, and limbs that are jointed such as a crab, lobster or shrimp.
Flora	Flora is all the plant life present in a particular region or time, generally the naturally occurring native plants.
Fauna	The animals of a particular region, habitat, or geological period.
Fungi	Fungi can be single celled or very complex multi cellular organisms. They are found in many habitats but can not make their own food like plants can.
Invertebrate	An animal without a backbone. They make up 95 per cent of animal species, in about thirty different phyla.
Micro-organism	Also called microbes. These are organisms which are microscopic e.g. bacteria, some fungi and protists, they are among the earliest known life
Mollusc	An invertebrate phylum including snails, slugs, mussels, and octopuses. They have a soft, unsegmented body and live in aquatic or damp habitats, and most kinds have an external shell.
Myriapod	Myriapods are invertebrates and arthropods with elongated bodies with numerous leg-bearing segments.
Porifera	A phylum of aquatic invertebrate animals that comprises the sponges.
Vertebrate	Vertebrates are animals that have a backbone inside their body. The major groups include fish, amphibians, reptiles, birds and mammals.
Virus	A microorganism that is smaller than a bacterium that cannot grow or reproduce apart from in a living cell.

Working Scientifically

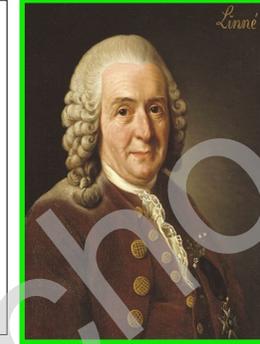
Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. They should use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment. Look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact. They should use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time.

Key Question: How do we identify organisms?

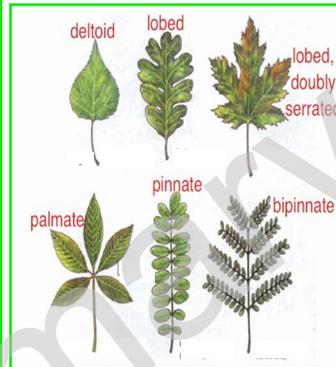


Marvellous Microbes

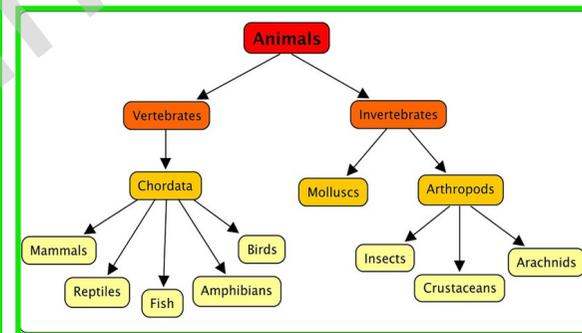
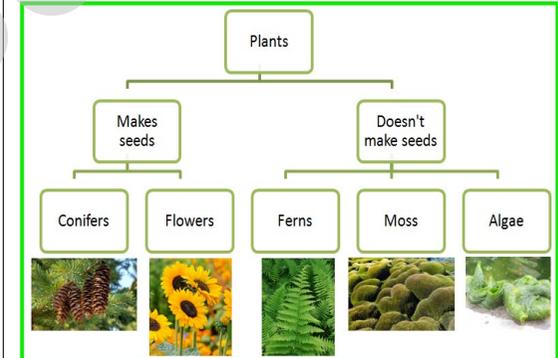
Bacteria are tiny, single celled organisms. They are quite different to plants and animals. They reproduce by splitting themselves in two. They are so small that we cannot see them without a microscope. Some bacteria cause diseases, but other bacteria can be very useful to us. They can be used to make cheese and beer!



Carl Linnaeus was born in Sweden on the 23rd May 1707. He developed the way we classify living things today. He spent his life studying plants and animals, he wanted every living thing to have a specific name. Each plant and animal was given a name made up of two words in Latin. The first word is a family name, like your surname. This is called the genus. The second name is called the species, and is like your first name. *Sciurus vulgaris* = red squirrel



Plants have many features that allow us to classify them. The shape of their leaves is one way and if they make seeds or cones, is another. Also if a plant is deciduous or coniferous?



Vertebrates are animals that have a backbone. Five classes fit into this group; Mammals are warm blooded, furred animals that give birth to live young and feed them milk. Birds are also warm blooded but have feathers and reproduce using eggs. All other groups also have their young in eggs - reptiles, amphibians and fish are also all cold blooded. Fish and reptiles have scales, but amphibian are smooth skinned and can breathe in and out of water. These characteristics allow us to classify animals.



Examples of fungi are mushrooms, toadstools, mould, yeast and lichen. They can not photosynthesise, but reproduce with spores. They get their food by decomposing matter or eating off their hosts as parasites.